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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

VU, HUNG K

ART UNIT

PAPER NUMBER

2811

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,895

Applicant(s)

AGNELLO ET AL.

Examiner

Hung K. Vu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-31 and 33-44 is/are pending in the application.
- 4a) Of the above claim(s) 28-31 and 35-38 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27,33,34 and 39-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Applicants' communication filed 01/10/03 has been carefully considered by the examiner. The arguments advanced therein are persuasive with respect to the rejections of record, and some of those rejections are accordingly withdrawn. In view of a further search and reconsideration, however, a new rejection is set forth further below. This action is not made final.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 27, 33-34 and 39-44 rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Raaijmakers (PN 4,908,331, of record). Raaijmakers discloses, as shown in Figure 2 and Col. 3, line 47 – Col. 4, line 50, a structure comprising a layer of cobalt disilicide (10) and a layer of silicon (1,3), wherein the layer of cobalt disilicide is on the layer of silicon, wherein the layer of cobalt disilicide is substantially free of cobalt monosilicide. Absent of evidence to the contrary it is held that there is no oxide of titanium on the layer of cobalt disilicide. Therefore, there won't be any stringer of an oxide of titanium on the layer of cobalt disilicide.

The terms "the layer of cobalt disilicide is in contact with a reagent comprising water, ammonium hydroxide, and hydrogen peroxide", "not adapted to chemically react", "4 percent of

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a total reagent volume of the reagent” and temperature with a range of about 45 degrees Celsius to about 95 degrees Celsius” are method recitations in a device claimed. Note that only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Also note that at the final structure, as shown in Figures 10 and 18 of the present invention, there is no reagent in contact with the cobalt disilicide. Therefore the limitation of reagent is really recited in the intermediate step of forming the cobalt disilicide.

With regard to claim 32, Raaijmakers discloses, as shown in Figure 2 and Col. 3, line 47 – Col. 4, line 50, a structure having a substrate (11), wherein the substrate includes:

- an insulated-gate field effect transistor (FET), wherein the FET includes a source (3), a drain (4), and a gate (6);

- a first layer of cobalt disilicide (10) on the source, the first layer having substantially no cobalt monosilicide;

- a second layer of cobalt disilicide (10) on the drain, the second layer having substantially no cobalt monosilicide;

- a third layer of cobalt disilicide (10) on the gate, the third layer having substantially no cobalt monosilicide. Absent of evidence to the contrary it is held that there is no oxide of titanium on the layer of cobalt disilicide. Therefore, there won't be any stringer of an oxide of titanium on the first, second and third layers of cobalt disilicide.

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The terms “the first layer of cobalt disilicide, the second layer of cobalt disilicide, and the third layer of cobalt disilicide are each in contact with a reagent comprising water, ammonium hydroxide, and hydrogen peroxide”, “not adapted to chemically react”, “4 percent of a total reagent volume of the reagent” and temperature with a range of about 45 degrees Celsius to about 95 degrees Celsius” are method recitations in a device claimed. Note that only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in “product by process” claims or not. Also note that at the final structure, as shown in Figures 10 and 18 of the present invention, there is no reagent in contact with the cobalt disilicide. Therefore the limitation of reagent is really recited in the intermediate step of forming the cobalt disilicide.

With regard to claim 33, Raaijmakers discloses the structure further comprising,

a first insulating structure (8) bordering a side of the source (3) and bordering a side of the first layer of cobalt disilicide (10); and

a second insulating structure (8) bordering a side of the drain (4) and bordering a side of the second layer of cobalt disilicide (10).

Response to Arguments

3. Applicant's arguments filed 01/10/03 have been fully considered but they are not persuasive.

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It is argued, at pages 5-9 of the Remarks, that the reagent functions as a structural limitation and not as a process limitation because the reagent is claimed only as being in contact with the final structural form of the layer of cobalt disilicide. This argument is not convincing because at the final structure, as shown in Figures 10 and 18 of the present invention, there is no reagent in contact with the cobalt disilicide. Therefore the limitation of reagent is really recited in the intermediate step of forming the cobalt disilicide. As the result, the term "the layer of cobalt disilicide is in contact with a reagent comprising water, ammonium hydroxide, and hydrogen peroxide" is method recitation in a device claimed. Note that only the final product is relevant, not the method of making. A product by process claim is directed to the product per se, no matter how actually made. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung K. Vu whose telephone number is (703) 308-4079. The examiner can normally be reached on Mon-Thurs 7:00-4:30, alternate Friday 7:00-3:30, Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (703) 308-2772. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Vu

May 20, 2003

Hunglin